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Parts I and II  
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## **AFSC 1N5X1**

# **ELECTRONIC SIGNALS INTELLIGENCE EXPLOITATION**



## **CAREER FIELD EDUCATION**

## **AND TRAINING PLAN**

**CAREER FIELD EDUCATION AND TRAINING PLAN  
ELECTRONIC SIGNALS INTELLIGENCE EXPLOITATION  
AFSC 1N5X1**

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# ELECTRONIC SIGNALS INTELLIGENCE EXPLOITATION SPECIALTY

## AFSC 1N5X1

### CAREER FIELD EDUCATION AND TRAINING PLAN

#### Part I

##### *Preface*

1. This Career Field Education and Training Plan (CFETP) is a comprehensive education and training document that identifies life-cycle education/training requirements, training support resources, and minimum core task requirements for this specialty. The CFETP will provide personnel a clear career path to success and will instill rigor in all aspects of career field training. **NOTE:** Civilians occupying associated positions will use Part II to support duty position qualification training.

2. The CFETP consists of two parts; both parts of the plan are used by supervisors to plan, manage, and control training within the career field.

2.1. **Part I** provides information necessary for overall management of the specialty. **Section A** explains how everyone will use the plan; **Section B** identifies career field progression information, duties and responsibilities, training strategies, and career field path; **Section C** associates each level with specialty qualifications (knowledge, education, training, experience, and other); **Section D** indicates resource constraints. Some examples are funds, manpower, equipment, facilities; **Section E** identifies transition training guide requirements for SrA through MSgt.

2.2. **Part II** includes the following: **Section A** identifies the Specialty Training Standard (STS) and includes duties, tasks, technical references to support training, Air Education and Training Command (AETC) conducted training, wartime course, core task, and correspondence course requirements; **Section B** contains the course objective list (COL) and training standards supervisors will use to determine if airmen satisfied training requirements; **Section C** identifies available support materials. An example is a Qualification training package which may be developed to support proficiency training. These packages are identified in Air Force Index 8, *Numerical Index of Specialized Educational Training Publications*; **Section D** identifies a training course index supervisors can use to determine resources available to support training. Included here are both mandatory and optional courses; **Section E** identifies Major Command (MAJCOM) unique training requirements supervisors can use to determine additional training required for the associated qualification needs.

3. Using guidance provided in the CFETP will ensure individuals in this specialty receive effective and efficient training at the appropriate point in their career. This plan will enable us to train today's work force for tomorrow's jobs. At unit level, supervisors and trainers will use Part II to identify, plan, and conduct training commensurate with the overall goals of this plan.

## ***ABBREVIATIONS/TERMS EXPLAINED***

**Advanced Training.** Formal course which provides individuals who are qualified in one or more positions of their AFS with additional skills/knowledge to enhance their expertise in the career field. Training is for selected career airmen at the advanced level of the AFS.

**Air Force Career Field Manager (AFCFM).** An individual on the Headquarters United States AF staff who is responsible for developing career development programs and managing the career field in coordination with using commands' functional managers, technical training center personnel, and AF personnel resource managers. This includes identifying the task requirements and training for an AF specialty (AFS) or occupational series.

**Career Field Education and Training Plan (CFETP).** A CFETP is a comprehensive, multipurpose document encapsulating the entire spectrum of education and training for a career field. It outlines a logical growth plan that includes training resources and is designed to make career field training identifiable, to eliminate duplication, and to ensure this training is budget defensible.

**Continuation Training.** Additional training, emphasizing present or future duty assignments, that exceeds requirements.

**Core Task.** A task AFCFM identifies as a minimum qualification requirement within an Air Force specialty or duty position.

**Course Objective List.** A publication, derived from initial/advanced skills course training standard, that identifies the tasks and knowledge requirements, and respective standards provided to achieve a 3- to 7-skill level in this career field. Supervisors use the COL to assist in conducting graduate evaluations in accordance with Air Force Instruction (AFI) 36-2201, Developing, Managing and Conducting Military Training Programs.

**Exportable Training.** Additional, supplementary training via computer assisted, paper text, interactive video, or other media.

**Initial Skills Training.** A basic, formal, in-residence course that leads to the award of a 3-skill level Air Force specialty code.

**Instructional System Development.** A deliberate and orderly, but flexible process used to plan, develop, implement, and manage instructional systems. It ensures personnel are taught in a cost efficient way the knowledge, skills, and attitudes essential for successful job performance.

**On-the-Job Training (OJT).** Hands-on, over-the-shoulder training conducted to certify personnel in both upgrade (skill level award) and job qualification (duty position certification) training.

**Qualification Training.** Actual hands-on, task performance training designed to qualify an individual in a specific duty position. This portion of the dual-channel on-the-job training (OJT) program occurs both during and after the upgrade training process. Qualification training provides the performance skills required to do the job.

**Qualification Training Package.** An instructional package used at the unit to qualify, or aid qualification, in a duty position or program, or on a piece of equipment. It may be printed, computer-based, or in other audiovisual media.

**Resource Constraints.** Resource deficiencies, such as money, facilities, time, manpower, and equipment that preclude desired training from being delivered.

**Specialty Training Standard.** An Air Force publication that describes skills and knowledge that an airman in a particular AFS needs on the job. It further serves as a contract between the Air Education and Training Command and the user to show the overall training requirements for an Air Force specialty code (AFSC) that the formal schools teach.

**Upgrade Training.** Mandatory training which leads to a higher level of proficiency.

## ***Section A - General Information***

**1. Purpose.** This CFETP provides information necessary for AFCFM, MAJCOM functional managers (MFM), commanders, training managers, supervisors, and trainers to plan, develop, manage, and conduct an effective career field training program. This plan outlines the training that individuals in this AFS should receive in order to develop and progress throughout their career. It also identifies initial skills, upgrade, qualification, advanced, and proficiency training. Initial skills training is the AFS specific training an individual receives upon entry into the Air Force or upon retraining into this specialty for award of the 3-skill level. Normally, this training is conducted by AETC at one of the technical training centers. Upgrade training identifies the mandatory courses, task qualification requirements, and correspondence course completion requirements for award of the 3-, 5-, 7-, 9-skill levels. Qualification training is actual hands-on task performance training designed to qualify an airman in a specific duty position. This training program occurs both during and after the upgrade training process. It provides the performance skills/knowledge required to do the job. Advanced training is formal, specialty training provided for selected airmen. Proficiency training is additional, in-residence, exportable, or on-the-job advanced training, provided to personnel to increase their skills and knowledge beyond the minimum required for upgrade. The CFETP also serves the following purposes:

- 1.1.** Serves as a management tool to plan, manage, conduct, and evaluate a career field training program. Also, it is used to help supervisors identify training at the appropriate point in an individual's career.
- 1.2.** Identifies task and knowledge training requirements for each skill level in the specialty and recommends education/training throughout each phase of an individual's career.
- 1.3.** Lists training courses available in the specialty, identifies sources of training, and the training delivery method.
- 1.4.** Identifies major resource constraints which impact full implementation of the desired career field training process.

**2. Uses.** The plan will be used by MFM and supervisors at all levels to ensure comprehensive and cohesive training programs are available for each individual in the specialty.

**2.1.** AETC training personnel will develop/revise formal resident, non-resident, field and exportable training based on requirements established by the users and documented in Part II of the CFETP. They will also work with the AFCFM to develop acquisition strategies for obtaining resources needed to provide the identified training.

**2.2.** MFM will ensure their training programs complement the CFETP mandatory initial, upgrade, and proficiency requirements. Identified requirements can be satisfied by OJT, resident training, contract training, or exportable courses. MAJCOM-developed training used to support this AFSC must be identified for inclusion into plan.

**2.3.** Each individual will complete the mandatory training requirements specified in this plan. The lists of courses in Part II will be used as a reference to support training.

**3. Coordination and Approval.** The AFCFM is the approval authority. MAJCOM representatives and AETC training personnel will identify and coordinate on the career field training requirements. The AETC training manager for this specialty will initiate an annual review of this document by AETC and MFM to ensure currency and accuracy. Using the list of courses in Part II, they will eliminate duplicate training.

## ***Section B - Career Progression and Information***

### **4. Specialty Description.**

**4.1. Specialty Summary.** Operates, performs, and manages electronic signals intelligence exploitation activities and functions. Operates electronic analysis, and related equipment. Analyzes, processes, and derives intelligence from electromagnetic transmissions. Related DoD Occupational Subgroup: 556.

### **4.2. Duties and Responsibilities:**

**4.2.1.** Conducts signals intelligence (SIGINT) activities and operations. Performs operator and analyst duties to exploit electronic intelligence (ELINT), foreign instrumentation signals intelligence (FISINT), and PROFORMA activities. Employs signals exploitation activities to support electronic combat (EC) operations.

**4.2.2.** Operates electronic search, and related equipment. Searches and exploits signal activity throughout the frequency spectrum. Operates directional, electromagnetic receiving, and recording systems to acquire, collect, and exploit electromagnetic transmissions.

**4.2.3.** Performs and oversees signals collection and analysis functions. Analyzes electromagnetic transmission characteristics. Determines line of bearing or origin point, external characteristics, and parameters of electromagnetic transmissions. Operates signals analysis and data processing equipment. Extracts data from electromagnetic signals and reports results. Evaluates electromagnetic transmission exploitation to ensure characteristics are accurately determined and reported.

**4.2.4.** Develops and maintains automated data bases and operational logs. Records equipment status, signals characteristics, and analytical findings.

**4.2.5.** Prepares and evaluates reports. Assembles operational and technical information. Performs quality control. Inspects and evaluates SIGINT, ELINT, FISINT, PROFORMA, and EC support activities. Performs fusion analysis.

**4.2.6.** Plans, organizes, and directs electromagnetic signals exploitation activities. Manages allotted resources for SIGINT, ELINT, FISINT, PROFORMA, and EC operations and analysis activities. Identifies responsibilities for overseeing operations, intelligence analysis, and data reduction functions. Plans operations and analysis functions and devises techniques to improve operations.

**5. Skill/Career Progression.** Adequate training and timely progression from the apprentice to the superintendent skill level play an important role in the Air Force's ability to accomplish its mission. It is essential that everyone involved in training do their part to plan, manage, and conduct an effective training program. The guidance provided in this part of the CFETP will ensure individuals receive viable training at appropriate points in their career. The following narrative, and the AFSC 1N5X1 career field path (see paragraph 8), identify the training career path. It defines the training required in an individual's career.

**5.1. Apprentice (3) Level.** Initial skills training in this specialty consists of the tasks and knowledge provided in the 3-skill level resident course (X3ABR1N531 004) taught at Goodfellow AFB, TX. Initial skills training requirements were identified and validated during the Utilization & Training Workshop (U&TW) held 30 March - 2 April 1999 at Goodfellow AFB. Individuals must complete the initial skills course to be awarded AFSC 1N531.

**5.2. Journeyman (5) Level Upgrade Requirements.** Upgrade training requires completion of duty position qualification training, the 5-level Career Development Course (CDC), and a minimum of 9 months OJT for retrainees or 15 months OJT for non-prior service trainees.

**5.3. Craftsman (7) Level Upgrade Requirements.** Upgrade to AFSC 1N571 requires completion of the 7-level Career Development Course (CDC), a minimum of 18 months OJT, and be at least a SSgt.

**5.4. Superintendent (9) Level Upgrade Requirements.** Upgrade to AFSC 1N591 requires promotion to SMSgt and completion of the Senior NCO Academy (SNCOA).

**6. Training Decisions.** The CFETP uses a building block approach (simple to complex) to encompass the entire spectrum of training requirements for the Electronic Signals Intelligence Exploitation career field. The spectrum includes a strategy for when, where, and how to meet the training requirements. The strategy must be apparent and affordable to reduce duplication of training and eliminate a disjointed approach to training.

**6.1. Initial Skills.** The initial skills course was revised to provide training necessary to prepare graduates for electronic signals intelligence exploitation specialty requirements and related duty positions.

**7. Community College of the Air Force (CCAF).** Enrollment in CCAF occurs upon completion of basic military training. CCAF provides the opportunity to obtain an Associate in Applied Sciences Degree. In addition to its associates degree program, CCAF offers the following:

**7.1. Occupational Instructor Certification.** Upon completion of instructor qualification training, consisting of the instructor methods course and supervised practice teaching, CCAF instructors who possess an associates degree or higher may be nominated by their school commander/commandant for certification as an occupational instructor.

**7.2. Trade Skill Certification.** When a CCAF student separates or retires, a trade skill certification is awarded for the primary occupational specialty. The College uses a competency based assessment process for trade skill certification at one of four proficiency levels: Apprentice, Journeyman, Craftsman/Supervisor, or Master Craftsman/Manager. All are transcribed on the CCAF transcript.

**7.3. Degree Requirements.** All airmen are automatically entered into the CCAF program. Prior to completing an associates degree, the 5-level must be awarded and the following requirements must be met:

	Semester Hours
Technical Education .....	24
Leadership, Management, and Military Studies .....	6
Physical Education .....	4
General Education .....	15
Program Elective .....	15
Technical Education; Leadership, Management, and Military Studies; or General Education	
Total.....	64

**7.3.1. Technical Education** (24 Semester Hours): A minimum of 12 semester hours of Technical Core subjects/courses must be applied and the remaining semester hours applied from Technical Core/Technical Elective subjects/courses. Refer to the CCAF Catalog for Application of Courses to the Technical Education area.

**7.3.2. Leadership, Management, and Military Studies** (6 Semester Hours): Professional military education and/or civilian management courses. Refer to the CCAF General Catalog for Application of Courses to the Leadership, Management, and Military Studies area.

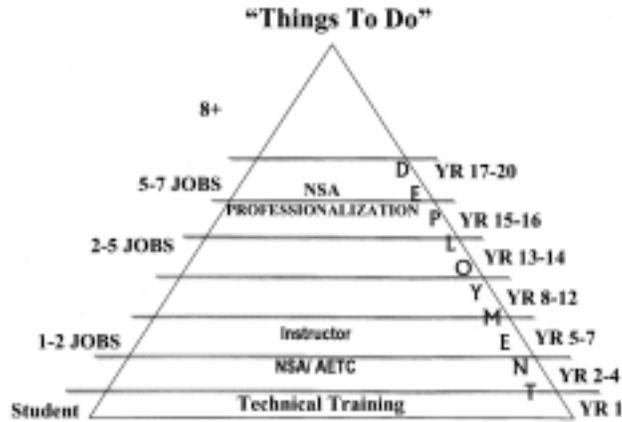
**7.3.3. Physical Education** (4 Semester Hours): This requirement is satisfied by completion of Basic Military Training.

**7.3.4. General Education** (15 Semester Hours): Applicable courses must meet the criteria for application of courses to the General Education Requirements (GER) and be in agreement with the definitions of applicable General Education subjects/courses as provided in the CCAF General Catalog.

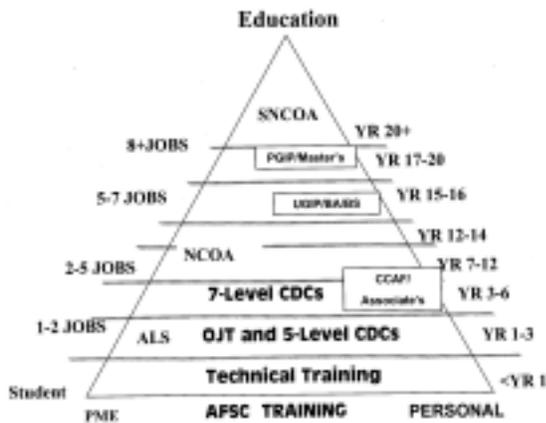
**7.3.5. Program Elective** (15 Semester Hours): Satisfied with applicable Technical Education; Leadership, Management, and Military Studies; or General Education subjects/courses, including natural science courses meeting GER application criteria. Six semester hours of CCAF degree applicable technical credit otherwise not applicable to this program may be applied. See the CCAF General Catalog for details regarding the Associates of Applied Science for this specialty.

**7.4.** Additional off-duty education is a personal choice that is encouraged for all. Individuals who desire to become an AETC instructor should be actively pursuing an associates degree. A degreed faculty is necessary to maintain accreditation through the Southern Association of Colleges and Schools.

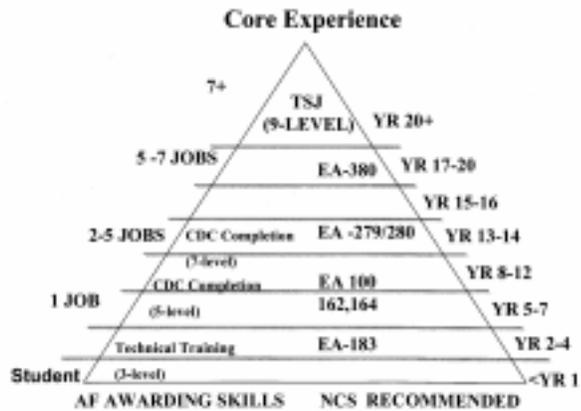
8. Career Field Path.



Cradle to Grave AFSC Requirements  
 What, When, Where, and How  
 Growth within an AFSC



Managing Career Field Training:  
 Lifecycle Training  
 Requirements/Resources



Minimum Training Requirements:  
 Skill-level/Duty Position Training  
 Exportable Training  
 Core Tasks

## ***Section C - Skill Level Training Requirements***

**9. Purpose.** Skill level training requirements in this career field are defined in terms of tasks and knowledge requirements. This section outlines the specialty qualification requirements for each skill level in broad, general terms and establishes the mandatory requirements for entry, award, and retention of each skill level. The specific task and knowledge training requirements are identified in the STS at Part II, Sections A and B of this CFETP.

### **10. Specialty Qualification:**

#### **10.1. Apprentice Level Training:**

##### **10.1.1. Specialty Qualification.**

**10.1.1.1. Knowledge.** Knowledge is mandatory of intelligence operations; data reduction and processing; reporting; electronic principles applicable to signals collection and analysis; and missions/functions of SIGINT, ELINT, FISINT, PROFORMA, and EC operations.

**10.1.1.2. Education.** Completion of high school with courses in basic electronics, physics, algebra, and trigonometry are desirable for entry into this specialty.

**10.1.1.3. Training.** Completion of a basic electronic signals intelligence exploitation course is mandatory for award of AFSC 1N531.

**10.1.1.4. Experience.** Qualification in the apprentice AFSC is mandatory for award of the journeyman AFSC.

##### **10.1.1.5. Other.**

**10.1.1.5.1.** For entry into this specialty, no record or history of temporomandibular joint pain or disorder.

**10.1.1.5.2.** For award and retention of AFSCs 1N531/51/71/91/00, eligibility for a Top Secret security clearance according to AFI 31-501, Personnel Security Management Program, and for sensitive compartmented information access.

**10.1.2. Training Sources and Resources.** Completion of the Electronic Signals Intelligence Exploitation course, taught at Goodfellow Air Force Base (AFB), satisfies the training requirements for award of the 3-skill level.

**10.1.3. Implementation.** The 1N531 AFSC is awarded upon completion of technical school.

#### **10.2. Journeyman Level Training:**

##### **10.2.1 Specialty Qualification.**

**10.2.1.1. Knowledge.** Knowledge is mandatory of intelligence operations; data reduction and processing; reporting; electronic principles applicable to signals collection and analysis; and missions/functions of SIGINT, ELINT, FISINT, PROFORMA, and EC operations.

##### **10.2.1.2. Education.**

**10.2.1.3. Training.** Completion of the 1N551 CDC is mandatory.

**10.2.1.4. Experience.** Qualification in and possession of AFSC 1N531. Also, experience performing functions such as collecting, interpreting, analyzing, and reporting electromagnetic transmissions.

##### **10.2.1.5. Other.**

**10.2.1.5.1.** For entry into this specialty, no record or history of temporomandibular joint pain or disorder.

**10.2.1.5.2.** For award and retention of AFSCs 1N531/51/71/91/00, eligibility for a Top Secret security clearance according to AFI 31-501, Personnel Security Management Program, and for sensitive compartmented information access.

**10.2.2. Training Sources and Resources.** The unit training manager is responsible for acquisition of the 5-skill level CDC.

**10.2.3. Implementation.** The 1N551 AFSC is awarded upon completion of all of the above requirements.

**10.3. Craftsman Level Training:**

**10.3.1 Specialty Qualification.**

**10.3.1.1. Knowledge.** Knowledge is mandatory of intelligence operations; data reduction and processing; reporting; electronic principles applicable to signals collection and analysis; and missions/functions of SIGINT, ELINT, FISINT, PROFORMA, and EC operations.

**10.3.1.2. Education.**

**10.3.1.3. Training.** Completion of the 1N571 CDC is mandatory

**10.3.1.4. Experience.** Qualification in and possession of AFSC 1N551. Also, experience performing or supervising functions such as collecting, interpreting, analyzing, and reporting electromagnetic transmissions.

**10.3.1.5. Other.**

**10.3.1.5.1.** For entry into this specialty, no record or history of temporomandibular joint pain or disorder.

**10.3.1.5.2.** For award and retention of AFSCs 1N531/51/71/91/00, eligibility for a Top Secret security clearance according to AFI 31-501, Personnel Security Management Program, and for sensitive compartmented information access.

**10.3.2. Training Sources and Resources.** The unit training manager is responsible for acquisition of the 7-skill level CDC.

**10.3.3. Implementation.** The 1N571 AFSC is awarded upon completion of all of the above requirements.

**10.4. Superintendent Level Training:**

**10.4.1 Specialty Qualification.**

**10.4.1.1. Knowledge.** Knowledge is mandatory of intelligence operations; data reduction and processing; reporting; electronic principles applicable to signals collection and analysis; and missions/functions of SIGINT, ELINT, FISINT, PROFORMA, and EC operations.

**10.4.1.2. Education.**

**10.4.1.3. Training.** Completion of the SNCOA is mandatory.

**10.4.1.4. Experience.** Qualification in and possession of AFSC 1N571. Also, completion of the Senior NCO Academy.

**10.4.1.5. Other.**

**10.4.1.5.1.** For entry into this specialty, no record or history of temporomandibular joint pain or disorder.

**10.4.1.5.2.** For award and retention of AFSCs 1N531/51/71/91/00, eligibility for a Top Secret security clearance according to AFI 31-501, Personnel Security Management Program, and for sensitive compartmented information access.

**10.4.2. Training Sources/Resources.** The SNCOA is located at Maxwell AFB, AL.

**10.4.3. Implementation.** The 1N591 AFSC is awarded upon completion of the SNCOA.

## *Section D - Resource Constraints*

**11. Purpose.** This section identifies known resource constraints, which preclude developing or conducting of optimal/desired training, including factors such as cost and manpower. Narrative explanations of each resource constraint and an impact statement describing its effect on training are included. Actions required, office of primary responsibility, and target completion dates are included. Resource constraints will be reviewed and updated at least annually.

### **12. Apprentice Level Training.**

**12.1. Constraint:** The three-level course requires 15 digital oscilloscopes. The course currently has analog oscilloscopes that are not capable of satisfying a Specialty Training Standard (STS) requirement from the March 1999 Utilization and Training Workshop (U&TW). The requirement requires performance to the 2b level and is item 6.1.1.7.8, Measure Time Domain Characteristics of a Pulsed Waveform Operating Signal Display Equipment to Determine Pulse Train Characteristics (e.g., stagger, dwell/switch, sliding, etc.). The acquisition of the requested digital storage capable oscilloscope will enable students to freeze the display to determine pulse train characteristics: Interpulse modulation (stagger, dwell/switch, etc.), pulse duration/width, pulse repetition interval (PRI), PRI positions and elements, scan type, and scan measurements.

**12.1.1. Impact:** Training Deficiency.

**12.1.2. Resources Required:** Fifteen FLUKE PM3394B Oscilloscopes. Eleven for training positions and four spares. Spares are required due to the extended precision measurement equipment laboratory (PMEL) calibration time. PMEL for Goodfellow is conducted by Dyess AFB and shipments are made only once a week. Classes are continuously in session and spares are required. Cost per unit is \$6,846.52, and total cost is \$102,697.80.

**12.1.3. Actions Required:** Fund, purchase, and integrate 15 digital oscilloscopes into the course.

**12.1.4. OPR and Target Completion Date:** 5 Jan 2000.

**12.2. Constraint:** The three-level course requires 13 spectrum analyzers. The course currently has spectrum analyzers that are not capable of satisfying STS requirement from the March 1999 U&TW. The requirement requires performance to the 2b level and is Item 6.1.1.7.9, Determine Intrapulse Modulation Characteristics; and 6.1.1.7.10, Determine Pulse Doppler Characteristics. The acquisition of the requested real-time spectrum analyzer enables student to freeze portions of an intercept for identification and measurement of intrapulse modulation parameters. The analyzer also displays the frequency components required to analyze pulse Doppler signals in the spectrum, spectrometer, and waterfall formats, satisfying the training requirements.

**12.2.1. Impact:** Training Deficiency.

**12.2.2. Resources Required:** Thirteen TEKTRONIX 3026 Spectrum Analyzers. The cost per unit is \$22,750.00, and the total cost is \$295,750.00.

**12.2.3. Actions Required:** Fund, purchase, and integrate 13 spectrum analyzers into the course.

**12.2.4. OPR and Target Completion Date:** 5 Jan 2000.

## *Section E - Transitional Training Guide*

**NOTE:** *There are currently no transitional training requirements. This area is reserved.*

### **Part II**

#### **Section A - Specialty Training Standard**

**1. Implementation.** This STS will be used for technical training provided by AETC for classes beginning 000105 and graduating 000425.

**2. Purpose.** As prescribed in AFI 36-2201, this STS:

**2.1.** Lists in the column 1 (Task, Knowledge, and Technical Reference) the most common tasks, knowledge, and technical references (TR) necessary for airman to perform duties in the 3-, 5-, and 7-skill level. Number task statements sequentially i.e., 1.1, 1.2, 2.1. Column 2 (Core Tasks) identifies, by asterisk (\*), specialty-wide training requirements.

**2.2.** Provides certification for OJT. Column 3 is used to record completion of tasks and knowledge training requirements. Use automated training management systems to document technician qualifications, if available. Task certification must show a certification/completed date.

**2.3.** Shows formal training and correspondence course requirements. Column 4 shows the proficiency to be demonstrated on the job by the graduate as a result of training on the task/knowledge and the career knowledge provided by the correspondence course. See CADRE/AFSC/CDC listing maintained by the unit training manager for current CDC listings.

**2.4. Qualitative Requirements.** Attachment 1 contains the proficiency code key used to indicate the level of training and knowledge provided by resident training and career development courses.

**2.5.** Becomes a job qualification standard (JQS) for OJT when placed in AF Form 623, **On-The-Job Training Record**, and used according to AFI 36-2201. When used as a JQS, the following requirements apply:

**2.5.1. Records Documentation.** Entries will be as follows:

**2.5.1.1. Identification.** Enter trainee's identification data, supervisors/trainers, and certifying official on the STS identification page.

**2.5.1.2. Certification:** Certify tasks (in pencil) as follows:

**2.5.1.2.1.** Circle current duty position task numbers. If in upgrade training, these tasks include core tasks commensurate with upgrade skill-level. Erase all other circled tasks not applicable to the current duty position.

**2.5.1.2.2.** As task training starts, enter the training start date.

**2.5.1.2.3.** When the trainee and the trainer agree to task proficiency, the trainee will initial the STS. For task certification, the certifying official will evaluate the trainee for proficiency. Upon satisfactory task performance, the certifier will enter the completion date and initials.

**2.5.1.2.4.** Some tasks are listed in two part form (i.e. Remove/Install). Training and time constraints can prevent consecutive task training or certification on both parts. In this situation, the supervisor or certifier circles the noun or verb trained. Certification is then accomplished according to above paragraphs.

**2.5.1.3. Decertification.** To decertify an individual who is no longer proficient at a required task, erase all entries associated with the task. A statement will be annotated on the AF Form 623a to reflect the reason for decertification.

**2.5.1.4. Recertification.** Once training is started, enter the new training start date. After completing the task to a “go” level, recertify following the procedures in paragraph 2.5.1.2. above.

**2.5.1.5. Transfer.** When necessary, e.g. the STS is saturated, dirty, mutilated, etc., supervisors may transfer data to a new STS. First identify current duty position tasks. Second, recertify tasks using current dates in the “completion date” block. The certifier will initial in the “certifying official” block. The trainee will initial in the “trainee” block. Tasks previously certified but not required in the current duty position will have only the previous certification date carried forward.

**2.5.2.** Tasks are trained and qualified to the go/no go level. Go means the individual can perform the task without assistance and meet local demands for accuracy, timeliness, and correct use of procedures.

**2.6.** Is a guide for **development of promotion tests** used in the Weighted Airman Promotion System (WAPS). Senior NCOs with extensive practical experience in their career fields develops Specialty Knowledge Tests (SKT) at the USAF Occupational Measurement Squadron. The tests sample knowledge of STS subject matter areas judged by test development team members as most appropriate for promotion to higher grades. Questions are based upon study references listed in the WAPS catalog. Individual responsibilities are in chapter 14 of AFI 36-2606. WAPS is not applicable to the Air National Guard.

**3. Recommendations.** Report unsatisfactory performance of individual course graduates. Reference this STS and address unclassified correspondence to: 17th Training Group, ATTN: CCME, 156 Marauder Street, Goodfellow AFB, Texas 76908-4114. Address classified correspondence to SSO GDFLW//17TRG/CCME//. A 24-hour Customer Service Information Line (CSIL) has been installed for the supervisor’s convenience to identify demonstrated over- or under-training on performance/knowledge items listed in this training standard. For quick response to any training concerns, call the CSIL, DSN 477-3350, any time day or night. For classified correspondence, call DSN 477-3693 (STU III).

## ***Section B - Course Objective List***

**1. Purpose.** This COL contains the training objectives supported by AETC in the 3-level resident course. These objectives, derived from the STS, are provided to aid supervisors in evaluating adequacy of technical school graduates.

**2. Objectives.** To aid the supervisor, the objectives are listed by the respective STS line item. In addition to the objective, the measurement device (“Meas”) for each is also listed.

**2.1. Measurement.** The adequacy of training is measured using written or performance tests. These are indicated in the COL as follows: **W** indicates task or subject knowledge, which is measured using a written test; **P** indicates required task performance, which is measured with a performance test or progress check.

**2.2. Standard.** The standard is 70% on written examinations. Standards for performance measurement are indicated on the individual performance checklist.

**3.** Most task performance is taught to the “2b” proficiency level which means the students can do most parts of the task, but needs assistance on the hardest parts of the task (partially proficient). The student can also determine step-by-step procedures for doing the task.

### **4. Course Objective List.**

#### **4.1. Initial Skills Course:**

#### **STS**

#### **LINE**

#### **ITEM**

#### **OBJECTIVE**

- |       |   |
|-------|---|
| 1.    | - Identify basic facts and terms about proper safety and first aid procedures associated with the use of electronic equipment and in compliance with applicable requirements. Meas: W |
| 2.1   | - Identify basic facts and terms about information security (INFOSEC). Meas: W  |
| 2.2   | - Identify basic facts and terms about communications security (COMSEC). Meas: W  |
| 2.3   | - Identify basic facts and terms about operational security (OPSEC). Meas: W  |
| 2.4   | - Identify basic facts and terms about computer security (COMPUSEC). Meas: W  |
| 2.5   | - Identify basic facts and terms about intelligence OVERSIGHT program. Meas: W  |
| 2.6   | - Identify basic facts and terms about SCI indoctrination. Meas: W  |
| 3.1.1 | - Identify basic facts and terms about the mission, function, and responsibility of the National Security Council (NSC) in the intelligence cycle. Meas: W                            |

- 3.1.2 - Identify basic facts and terms about the mission, function, and responsibility of the National SIGINT Committee Staff in the intelligence cycle. Meas: W
- 3.1.3 - Identify basic facts and terms about the mission, function, and responsibility of the Director of Central Intelligence (DCI) in the intelligence cycle. Meas: W
- 3.2.1 - Identify basic facts and terms about the mission, function, and responsibility of Defense Intelligence Agency (DIA) in the intelligence cycle. Meas: W
- 3.2.2 - Identify basic facts and terms about the mission, function, and responsibility of the Central Intelligence Agency (CIA) in the intelligence cycle. Meas: W
- 3.2.3 - Identify basic facts and terms about the mission, function, and responsibility of the National Security Agency/Central Security Service (NSA/CSS) in the intelligence cycle. Meas: W
- 3.2.4 - Identify basic facts and terms about the mission, function, and responsibility of the Service Cryptologic Elements (SCE) in the intelligence cycle. Meas: W
- 3.2.5 - Identify basic facts and terms about the mission, function, and responsibility of the National Security Operations Center (NSOC) in the intelligence cycle. Meas: W
- 3.2.6 - Identify basic facts and terms about the roles and mission of S&T centers and how they support the national SIGINT mission. Meas: W
- 3.2.7 - Identify basic facts and terms about the mission, function, and responsibility of the Tasking Authority in the intelligence cycle. Meas: W
- 3.2.8 - Identify basic facts and terms about ELINT support to military operations (including ELINT, FISINT, PROFORMA, EC) in the intelligence cycle. Meas: W
- 3.2.9 - Identify relationships of basic facts and state principles about the mission, function, and responsibility of the ELINT community in the intelligence cycle. Meas: W
- 3.3.1 - Identify basic facts and terms about the purpose of SIGINT as an intelligence function. Meas: W
- 3.3.2 - Identify basic facts and terms about the purpose of COMINT as an intelligence function. Meas: W
- 3.3.3 - Identify relationships of basic facts and state principles about the purpose of ELINT as an intelligence function. Meas: W
- 3.3.4 - Identify basic facts and terms about the purpose of FISINT as an intelligence function. Meas: W
- 3.3.5 - Identify basic facts and terms about the purpose of PROFORMA as an intelligence function. Meas: W
- 3.3.6 - Identify basic facts and terms about the purpose of HUMINT as an intelligence function. Meas: W
- 3.3.7 - Identify basic facts and terms about the purpose of IMINT as an intelligence function. Meas: W

- 3.3.8 - Identify basic facts and terms about the purpose of MASINT as an intelligence function. Meas: W
- 3.3.9 - Identify basic facts and terms about the purpose of Global Network Intelligence as an intelligence function. Meas: W
- 3.4.1 - Identify relationships of basic facts and state principles about the difference between strategic and tactical intelligence as found in OPELINT. Meas: W
- 3.4.2 - Identify relationships of basic facts and state principles about the difference between strategic and tactical intelligence as found in TECHELINT. Meas: W
- 3.5.1.1 - Identify relationships of basic facts and state principles of Electronic Warfare Support (ES). Meas: W
- 3.5.1.2 - Identify basic facts and terms about Electronic Attack (EA). Meas: W
- 3.5.1.3 - Identify basic facts and terms about Electronic Protect (EP). Meas: W
- 3.5.2.1 - Identify basic facts and terms about the types of jamming. Meas: W
- 3.5.2.2 - Identify basic facts and terms about the effectiveness of jamming. Meas: W
- 3.5.2.3 - Identify basic facts and terms about data error rates. Meas: W
- 3.5.2.4 - Identify basic facts and terms about data sync errors. Meas: W
- 3.5.3.1 - Identify basic facts and terms about Electronic Combat (EC) assets. Meas: W
- 3.5.3.2 - Identify basic facts and terms about operational employment. Meas: W
- 4. - Provided lecture/demonstration, solve problems using mathematical formulas and radar parameters. Meas: P
- 5.1 - Identify relationships of basic facts and state principles about relationships, properties, characteristics, and aspects of EM Energy, waveforms, and modulation. Meas: W
- 5.2.1 - Identify relationships of basic facts and state principles about electromagnetic energy. Meas: W
- 5.2.2 - Identify relationships of basic facts and state principles about electromagnetic spectrum. Meas: W
- 5.2.3 - Identify relationships of basic facts and state principles about radio frequency (RF). Meas: W
- 5.2.4 - Identify relationships of basic facts and state principles about RF spectrum. Meas: W
- 5.3.1.1 - Identify relationships of basic facts and state principles about a cycle. Meas: W
- 5.3.1.2 - Identify relationships of basic facts and state principles about a period. Meas: W
- 5.3.1.3 - Identify relationships of basic facts and state principles about a wavelength. Meas: W

- 5.3.1.4 - Identify relationships of basic facts and state principles about frequency. Meas: W
- 5.3.1.5 - Identify relationships of basic facts and state principles about phase (angle/frequency). Meas: W
- 5.3.2.1 - Identify relationships of basic facts and state principles about linear/non linear mixing. Meas: W
- 5.3.2.2 - Identify basic facts and terms about Fourier components (series). Meas: W
- 5.3.2.3 - Identify relationships of basic facts and state principles about bandwidth. Meas: W
- 5.3.2.4 - Identify relationships of basic facts and state principles about pulse characteristics. Meas: W
- 5.3.3 - Identify basic facts and terms about signal - noise ratio. Meas: W
- 5.4.1 - Identify relationships of basic facts and state principles about aspects of amplitude modulation associated with electromagnetic energy. Meas: W
- 5.4.2.1 - Identify relationships of basic facts and state principles about aspects of frequency related to angle modulation and associated with electromagnetic energy. Meas: W
- 5.4.2.2 - Identify relationships of basic facts and state principles about aspects of phase related to angle modulation and associated with electromagnetic energy. Meas: W
- 5.4.3.1 - Identify relationships of basic facts and state principles about aspects of pulse amplitude modulation associated with electromagnetic energy. Meas: W
- 5.4.3.2 - Identify relationships of basic facts and state principles about aspects of pulse frequency modulation associated with electromagnetic energy. Meas: W
- 5.4.3.3 - Identify relationships of basic facts and state principles about aspects of pulse coded modulation associated with electromagnetic energy. Meas: W
- 5.4.3.4 - Identify relationships of basic facts and state principles about aspects of pulse duration modulation associated with electromagnetic energy. Meas: W
- 5.4.3.5 - Identify relationships of basic facts and state principles about aspects of pulse position modulation associated with electromagnetic energy. Meas: W
- 5.4.3.6 - Identify relationships of basic facts and state principles about aspects of pulse group modulation associated with electromagnetic energy. Meas: W
- 5.4.4.1 - Identify relationships of basic facts and state principles about aspects of frequency division multiplexing (FDM) associated with electromagnetic energy. Meas: W
- 5.4.4.2 - Identify relationships of basic facts and state principles about aspects of time division multiplexing (TDM) associated with electromagnetic energy. Meas: W
- 5.4.5 - Identify relationships of basic facts and state principles about aspects of RF agile signals associated with electromagnetic energy. Meas: W
- 5.5.1. - Identify basic facts and terms about the characteristics of antenna types. Meas: W

- 5.5.2 - Identify basic facts and terms about the characteristics of antenna impedance. Meas: W
- 5.5.3 - Identify basic facts and terms about the characteristics of antenna patterns. Meas: W
- 5.5.4 - Identify basic facts and terms about the characteristics of antenna bandwidth. Meas: W
- 5.5.5 - Identify basic facts and terms about the characteristics of antenna beamwidth. Meas: W
- 5.5.6 - Identify basic facts and terms about the characteristics of antenna gain. Meas: W
- 5.5.7 - Identify basic facts and terms about the characteristics of antenna polarization. Meas: W
- 5.5.8 - Identify basic facts and terms about the characteristics of antenna reciprocity. Meas: W
- 5.5.9 - Identify basic facts and terms about the characteristics of antenna directivity. Meas: W
- 5.5.10 - Identify basic facts and terms about the characteristics of antenna transmission lines. Meas: W
- 5.5.11 - Identify basic facts and terms about the characteristics of antenna arrays. Meas: W
- 5.5.12 - Identify basic facts and terms about the characteristics of antenna functions. Meas: W
- 5.6.1 - Identify basic facts and terms about the aspects of radio wave propagation characteristics (absorption, reflection, scatter, refraction, noise, and diffraction). Meas: W
- 5.6.2 - Identify basic facts and terms about the aspects of radio wave propagation by atmospheric layers. Meas: W
- 6.1.1.1 - Provided lecture/demonstration, measure time and frequency domain characteristics of a pulsed waveform operating an oscilloscope and determine signal characteristics. Meas: P
- 6.1.1.2 - Provided lecture/demonstration, measure time and frequency domain characteristics of a pulsed waveform operating a spectrum analyzer and determine signal characteristics. Meas: P
- 6.1.1.3 - Provided lecture/demonstration, measure time and frequency domain characteristics of a pulsed waveform operating a counter and determine signal characteristics. Meas: P
- 6.1.1.4 - Provided lecture/demonstration, measure time and frequency domain characteristics of a pulsed waveform operating an oscillographic display/recorder and determine signal characteristics. Meas: P
- 6.1.1.5 - Provided lecture/demonstration, measure time and frequency domain characteristics of a pulsed waveform operating a PLO/PRF synthesizer and determine signal characteristics. Meas: P

- 6.1.1.6 - Provided lecture/demonstration, measure time and frequency domain characteristics of a pulsed waveform operating signal modifiers and determine signal characteristics. Meas: P
- 6.1.1.7.1 - Provided lecture/demonstration, calculate the bandwidth of an analog signal using measured parameters using analog equipment. Meas: P
- 6.1.1.7.2 - Provided lecture/demonstration, measure the pulse repetition interval/frequency (PRI/PRF) of an analog signal using analog equipment. Meas: P
- 6.1.1.7.3 - Provided lecture/demonstration, measure the pulse duration/width (PD/PW) of an analog signal using analog equipment. Meas: P
- 6.1.1.7.4 - Provided lecture/demonstration, calculate the duty cycle of an analog signal using measured parameters using analog equipment. Meas: P
- 6.1.1.7.5 - Provided lecture/demonstration, determine the scan type of an analog signal using analog equipment. Meas: P
- 6.1.1.7.6 - Provided lecture/demonstration, measure the appropriate scan parameters (time/rate, lobe duration, beamwidth, etc.) of an analog signal using analog equipment. Meas: P
- 6.1.1.7.7 - Provided lecture/demonstration, measure the appropriate frequency spectrum parameters of an analog signal using analog equipment. Meas: P
- 6.1.1.7.8 - Provided lecture/demonstration, measure the pulse train characteristics of an analog signal using analog equipment. Meas: P
- 6.1.1.7.9 - Provided lecture/demonstration, measure the intrapulse modulation parameters of an analog signal using analog equipment. Meas: P
- 6.1.1.7.10 - Provided lecture/demonstration, measure the pulse Doppler pulse train parameters on an analog signal using analog equipment. Meas: P
- 6.1.1.7.11 - Provided lecture/demonstration, document descriptive and measurable signal characteristics for an analog signal. Meas: P
- 6.1.2.1 - Provided lecture/demonstration, determine intrapulse modulation of a signal using Continuous Analog to Digital (CAD) and Burst Analog to Digital (BAD) digitized data. Meas: P
- 6.1.2.2 - Provided lecture/demonstration, determine interpulse modulation of a signal using Time Based Data (TBD) digitized data. Meas: P
- 6.1.2.3.1 - Provided lecture/demonstration, calculate the bandwidth of a digitized signal using measured parameters. Meas: P
- 6.1.2.3.2 - Provided lecture/demonstration, measure the pulse repetition interval/frequency (PRI/PRF) of a signal using digitized signal data. Meas: P
- 6.1.2.3.3 - Provided lecture/demonstration, measure the pulse duration/width (PD/PW) of a signal using digitized signal data. Meas: P

- 6.1.2.3.4 - Provided lecture/demonstration, calculate the duty cycle of a digitized signal, using measured parameters. Meas: P
- 6.1.2.3.5 - Provided lecture/demonstration, determine the scan type of a signal using digitized data. Meas: P
- 6.1.2.3.6 - Provided lecture/demonstration, measure the appropriate scan parameters (time/rate, lobe duration, beamwidth, etc.) of a signal using digitized data. Meas: P
- 6.1.2.3.7 - Provided lecture/demonstration, measure the appropriate frequency spectrum parameters of a signal using digitized data. Meas: P
- 6.1.2.3.8 - Provided lecture/demonstration, measure the pulse train characteristics of a signal using digitized data. Meas: P
- 6.1.2.3.9 - Provided lecture/demonstration, measure the pulse Doppler pulse train parameters of a signal using digitized data signal. Meas: P
- 6.1.2.3.10 - Provided lecture/demonstration, measure the intrapulse modulation parameters of a signal using digitized data. Meas: P
- 6.1.2.3.11 - Provided lecture/demonstration, document descriptive and measurable characteristics of a signal. Meas: P
- 6.1.3 - Identify basic facts and terms about principles of analog signal processing. Meas: W
- 6.1.4 - Identify basic facts and terms about principles of digital signal processing. Meas: W
- 7.1 - Identify relationships of basic facts and state general principles about radar component functions and their limitations. Meas: W
- 7.2.1 - Identify relationships of basic facts and state principles about RADAR. Meas: W
- 7.2.2 - Identify relationships of basic facts and state principles about RADAR operation. Meas: W
- 7.2.3 - Identify basic facts and terms about the RADAR range equation. Meas: W
- 7.3.1 - Identify relationships of basic facts and state principles about RADAR signal processing measurable characteristics. Meas: W
- 7.3.2 - Identify relationships of basic facts and state principles about RADAR signal processing descriptive characteristics. Meas: W
- 7.3.3 - Identify relationships of basic facts and state principles about additional RADAR signal processing intercept parameters. Meas: W
- 7.3.4 - Identify relationships of basic facts and state principles about the RADAR resolution cell. Meas: W
- 7.3.5 - Identify relationships of basic facts and state principles about RADAR velocity resolution. Meas: W
- 7.3.6 - Identify relationships of basic facts and state principles about a simple pulsed RADAR block diagram. Meas: W

- 7.3.7 - Identify relationships of basic facts and state principles about a RADAR presentation system. Meas: W
- 7.4.1 - Identify relationships of basic facts and state principles about CW/FM-CW modulation. Meas: W
- 7.4.2.1 - Identify relationships of basic facts and state principles about pulse compression. Meas: W
- 7.4.2.2 - Identify relationships of basic facts and state principles about chirp modulation. Meas: W
- 7.4.3.1 - Identify relationships of basic facts and state principles about pulse sliding/stepping/switch and dwell modulation. Meas: W
- 7.4.3.2 - Identify relationships of basic facts and state principles about pulse jitter modulation. Meas: W
- 7.4.3.3 - Identify relationships of basic facts and state principles about pulse stagger modulation. Meas: W
- 7.4.3.4 - Identify relationships of basic facts and state principles about pulse group modulation. Meas: W
- 7.4.4 - Identify basic facts and terms about principles of pulse code modulation. Meas: W
- 7.4.5 - Identify basic facts and terms about principles about pulse Doppler modulation. Meas: W
- 7.5.1 - Identify relationships of basic facts and state principles about RADAR radio frequency characteristics and parameters. Meas: W
- 7.5.2 - Identify basic facts and terms about principles about RADAR wideband characteristics and parameters. Meas: W
- 7.5.3 - Identify relationships of basic facts and state principles about RADAR modulation type, pulses per group characteristics and parameters. Meas: W
- 7.5.4 - Identify relationships of basic facts and state principles about RADAR pulse repetition frequency characteristics and parameters. Meas: W
- 7.5.5 - Identify relationships of basic facts and state principles about RADAR pulse repetition interval characteristics and parameters. Meas: W
- 7.5.6 - Identify relationships of basic facts and state principles about RADAR pulse group repetition frequency characteristics and parameters. Meas: W
- 7.5.7 - Identify relationships of basic facts and state principles about RADAR pulse group repetition interval characteristics and parameters. Meas: W
- 7.5.8 - Identify relationships of basic facts and state principles about RADAR pulse duration/width characteristics and parameters. Meas: W

- 7.5.9 - Identify relationships of basic facts and state principles about RADAR scan type characteristics and parameters. Meas: W
- 7.5.10 - Identify relationships of basic facts and state principles about RADAR scan period characteristics and parameters. Meas: W
- 7.5.11 - Identify relationships of basic facts and state principles about RADAR illumination rate characteristics and parameters. Meas: W
- 7.5.12 - Identify basic facts and terms about principles about RADAR lobe duration characteristics and parameters. Meas: W
- 7.5.13 - Identify basic facts and terms about principles of RADAR beamwidth characteristics and parameters. Meas: W
- 7.5.14 - Identify basic facts and terms about principles of RADAR frame/channel rate characteristics and parameters. Meas: W
- 7.6.1.1 - Identify relationships of basic facts and state principles about air bombing radar system functions. Meas: W
- 7.6.1.2 - Identify relationships of basic facts and state principles about air mapping radar system functions. Meas: W
- 7.6.1.3 - Identify relationships of basic facts and state principles about airborne fire control radar system functions. Meas: W
- 7.6.2.1 - Identify relationships of basic facts and state principles about landbased early warning radar system functions. Meas: W
- 7.6.2.2 - Identify relationships of basic facts and state principles about landbased battlefield surveillance radar system functions. Meas: W
- 7.6.2.3 - Identify relationships of basic facts and state principles about landbased fire control radar system functions. Meas: W
- 7.6.2.4 - Identify relationships of basic facts and state principles about landbased missile control radar system functions. Meas: W
- 7.6.2.5 - Identify relationships of basic facts and state principles about landbased controlled intercept radar system functions. Meas: W
- 7.6.2.6 - Identify relationships of basic facts and state principles about coastal surveillance radar system functions. Meas: W
- 7.6.3.1 - Identify relationships of basic facts and state principles about shipborne early warning, surface search, and navigation radar system functions. Meas: W
- 7.6.3.2 - Identify relationships of basic facts and state principles about shipborne fire control radar system functions. Meas: W
- 7.6.4 - Identify relationships of basic facts and state principles about spacebased radar system functions. Meas: W
- 7.6.5 - Identify relationships of basic facts and state principles about air defense system functions. Meas: W

- 7.6.6 - Identify relationships of basic facts and state principles about moving target indicator/moving target detection RADAR system functions. Meas: W
- 7.6.7 - Identify relationships of basic facts and state principles about multi-function RADAR system functions. Meas: W
- 7.6.8 - Identify relationships of basic facts and state principles about jammer (active/passive) RADAR system functions. Meas: W
- 7.7 - Identify relationships of basic facts and state principles about wartime reserve mode (WARM) operations. Meas: W
- 7.8 - Provided lecture/demonstration, perform threat correlation by correlating electronic/weapon fit to associated landbased, airborne, and/or shipborne hostile platforms. Meas: P
- 7.9.1 - Identify basic facts and terms about crystal controlled emitters correlated to associated landbased, airborne, and/or shipborne hostile platforms. Meas: W
- 7.9.2 - Identify basic facts and terms about non-crystal controlled emitters correlated to associated landbased, airborne, and/or shipborne hostile platforms. Meas: W
- 8.1 - Identify basic facts and terms about relationships, properties, characteristics, and aspects of orbiting bodies related to orbital mechanics. Meas: W
- 8.2.1 - Identify basic facts and terms about orbital parameters. Meas: W
- 8.2.2 - Identify basic facts and terms about reference systems. Meas: W
- 9.1 - Identify basic facts and terms about relationships, properties, characteristics, and aspects of foreign instrumentation signals. Meas: W
- 9.2.1 - Identify basic facts and terms about signal concepts associated with the nature of the target. Meas: W
- 9.2.2 - Identify basic facts and terms about space vehicles associated with the nature of the target. Meas: W
- 9.2.3 - Identify basic facts and terms about foreign instrumentation signals systems associated with the nature of the target. Meas: W
- 9.3 - Identify basic facts and terms about foreign instrumentation signals collection systems. Meas: W
- 9.4 - Identify basic facts and terms about foreign instrumentation signals reports. Meas: W
- 10. - Identify basic facts and terms about properties, characteristics, and aspects of a PROFORMA signal. Meas: W
- 11.1 - Identify relationships of basic facts and state principles about the ELINT signal collection process. Meas: W
- 11.2 - Identify relationships of basic facts and state principles about ELINT signal collection system components. Meas: W

- 11.3 - Identify relationships of basic facts and state principles about ELINT signal collection techniques. Meas: W
- 11.4 - Identify basic facts and terms about manual ELINT collection systems. Meas: W
- 11.5 - Identify relationships of basic facts and state principles about automatic ELINT collection systems. Meas: W
- 11.6 - Identify relationships of basic facts and state principles about semi-automatic ELINT collection systems. Meas: W
- 11.7.1 - Identify basic facts and terms about downstream monitoring of a signal. Meas: W
- 11.7.2 - Identify basic facts and terms about upstream monitoring of a signal. Meas: W
- 11.8 - Provided lecture/demonstration, with assistance, perform down conversion of a signal on a magnetic recording media. Meas: P
- 11.9 - Provided lecture/demonstration, with assistance, perform pre-detection of a signal on a magnetic recording media. Meas: P
- 11.10 - Provided lecture/demonstration, with assistance, perform AM/FM detection of a signal on a magnetic recording media. Meas: P
- 11.11 - Provided lecture/demonstration, with assistance, perform center tuning of a signal on a magnetic recording media. Meas: P
- 12.1 - Provided lecture/demonstration, identify ELINT signals using the ELINT Parameters List (EPL). Meas: P
- 12.2 - Provided lecture/demonstration, identify FISINT signals using the Telemetry Beaconry Analysis Guide (TEBAG). Meas: P
- 12.3 - Provided lecture/demonstration, with assistance, identify PROFORMA signals using the RASIN manual/catalog; COMINT Parameters List (CPL); EPL; PROFORMA Signal Index (PSI); or PROFORMA Cross Index. Meas: P
- 12.4 - Provided lecture/demonstration, with assistance, determine collection, processing, analysis, and/or reporting requirements, and/or procedures using the USSID system. Meas: P
- 12.5.1 - Provided lecture/demonstration, identify emanating platform using the Electronic Order of Battle (EOB). Meas: P
- 12.5.2 - Provided lecture/demonstration, identify emanating platform using the Electronic Weapons Fit (EWF). Meas: P
- 12.6 - Provided lecture/demonstration, identify emanating platform using ATTP 3-1, Vol 2. Meas: P
- 13.1 - Provided lecture/demonstration, perform data processing using mapping tools, algorithms, ELINT reports, and display tools. Meas: P
- 13.2.1 - Provided lecture/demonstration, perform basic computer functions, principles, and fundamentals. Meas: P
- 13.2.2 - Provided lecture/demonstration, perform computer based applications. Meas: P

- 13.3 - Provided lecture/demonstration, extract data from ELINT reports. Meas: P
- 13.4 - Provided lecture/demonstration, correlate ELINT data. Meas: P
- 13.5 - Provided lecture/demonstration, perform data manipulation. Meas: P
- 13.6 - Provided lecture/demonstration, map/correlate activity level data to a location. Meas: P
- 13.7 - Provided lecture/demonstration, correlate activity level data to a command level. Meas: P
- 13.7.1 - Identify basic facts and terms about INTELINK. Meas: W
- 13.7.2 - Identify basic facts and terms about GALE-LITE. Meas: W
- 13.7.3 - Identify basic facts and terms about MARTES. Meas: W
- 13.7.4 - Identify basic facts and terms about K2000. Meas: W
- 13.7.5 - Identify basic facts and terms about TBDMS. Meas: W
- 13.8.1 - Identify basic facts and terms about KILTING/EWIR database. Meas: W
- 13.8.2 - Identify basic facts and terms about WRANGLER database. Meas: W
- 13.8.3 - Identify basic facts and terms about NSRL. Meas: W
- 13.8.4 - Identify basic facts and terms about TECGM. Meas: W
- 13.8.5 - Identify basic facts and terms about MIDB II. Meas: W
- 13.8.6 - Identify basic facts and terms about STAR SAPPHIRE. Meas: W
- 14. - Identify basic facts and terms about Intelligence Preparation of the Battlespace (IPB). Meas: W
- 15. - Identify basic facts and terms about Information Operations (IO). Meas: W
- 16.1 - Provided lecture/demonstration, prepare analysis worksheets/logs using measurable and descriptive characteristics. Meas: P
- 16.2.1 - Provided lecture/demonstration, measure distance on a map/chart using plotting techniques. Meas: P
- 16.2.2 - Provided lecture/demonstration, determine grid coordinates using plotting techniques. Meas: P
- 16.2.3 - Provided lecture/demonstration, determine latitude/longitude using plotting techniques. Meas: P
- 16.3 - Provided lecture/demonstration, identify topographical symbols on a map/chart. Meas: P
- 16.4 - Identify basic facts and terms about the creation of a finished intelligence product from collected all-source data. Meas: W
- 16.5.1 - Provided lecture/demonstration, compile and prepare a JINTACCS report. Meas: P
- 16.5.2 - Provided lecture/demonstration, compile and prepare a UNIFORM report. Meas: P

- 16.5.3 - Provided lecture/demonstration, compile and prepare a UNIFORM C report. Meas: P
- 16.5.4 - Identify relationships of basic facts and state principles about a Product Verification Request (PVR). Meas: W
- 16.6.1 - Identify relationships of basic facts and state principles about the TDDS/TRE reporting mechanism. Meas: W
- 16.6.2 - Identify basic facts and terms about the TADIX B reporting mechanism. Meas: W
- 16.6.3 - Identify basic facts and terms about the TACELINT reporting mechanism. Meas: W
- 16.6.4 - Identify basic facts and terms about the OPELINT reporting mechanism. Meas: W
- 16.6.5 - Identify basic facts and terms about the CRITICOM reporting mechanism. Meas: W
- 16.6.6 - Identify basic facts and terms about the TIBS reporting mechanism. Meas: W
- 16.6.7 - Identify basic facts and terms about the IBS reporting mechanism. Meas: W

*Section C - Support Material*

**NOTE:** There are currently no support material requirements. This area is reserved.

**Section D - Training Course Index**

**1. Purpose.** This section of the CFETP identifies training courses available for the specialty.

**2. Air Force Courses.** The following table is not all-inclusive. Refer to Air Force Education and Training Course Announcements (ETCA) located at <http://hq2af.keesler.af.mil/etca.htm> for a complete listing of courses available to the 1N5X1 AFS.

<b>COURSE NUMBER</b>	<b>TITLE</b>	<b>LOCATION</b>	<b>USER</b>
X3ABR1N531 004 <sup>1</sup>	Electronic Signals Intelligence Exploitation Apprentice	Goodfellow AFB	USAF
X5AZA1N551 007	Telemetry Collection Operations	Ft. Huachuca	USAF
<sup>1</sup>	Airman Leadership School		USAF
<sup>1</sup>	USAF NCOA		USAF
MAFSNCOA 100 <sup>1</sup>	USAF SNCOA	Gunter AFS	USAF
X5AZN1N551 002	National Operational ELINT Course	Corry Station	USAF
X3OZR14N3 001	CONSTANT SOURCE Operations	Goodfellow AFB	USAF
1N551 Career Development Course <sup>1,2</sup>	Electronic Signals Intelligence Exploitation Journeyman (5-Skill Level Career Development Course)	Extension Course Institute	USAF
1N571 Career Development Course <sup>1,2</sup>	Electronic Signals Intelligence Exploitation Craftsman (7-Skill Level Career Development Course)	Extension Course Institute	USAF

**NOTES:** <sup>1</sup> - Air Force courses that are **MANDATORY**.  
<sup>2</sup> - Available through the unit Training Manager.

**3. National Cryptologic School (NCS) In-Residence Courses:** The following table is not all-inclusive. Refer to the NCS Catalog for a complete listing of available NCS courses. While most of these courses are taught at the NCS, many are available through the Adjunct Faculty Program.

<b>COURSE NUMBER</b>	<b>TITLE</b>
CY-200	Senior Enlisted Cryptologic Course
EA-003	Short Duration Signals Recognition
EA-005	FISINT Orientation
EA-050	Introduction to Telemetry Analysis
EA-099/100	Basic Signals Technology
EA-106	Introduction to Digital Signals Analysis
EA-161	Fundamentals of Spread Spectrum
EA-163	Shift Register Generated Sequences
EA-166	Spectrum Analysis
EA-168	Multiplexing Technology
EA-171	Antenna Fundamentals
EA-176	Introduction to Spacecraft Analysis

EA-178	Satellite Communication Systems
EA-181	Fundamentals of Digital Signal Processing
EA-186	Concepts in Modulation and Demodulation
EA-220	Telemetry Internals Analysis
EA-221	FIS Externals Analysis
EA-222	FIS Measurement and Analysis Techniques
EA-264	Satellite Seminar
EA-265	The National SIGINT Systems
EA-280	Intermediate Technical ELINT Analysis
EA-281	ELINT Digital Analysis Training
EA-301	Interpretive ELINT Analysis
EA-305	Signals Analysis: Contemporary Issues
EA-380	Advanced ELINT Collection/Analysis
ED-101	Training Methods for Cryptologic Instructors
EG-055	Effective Agency Writing I
EG-155	Effective Agency Writing II
EG-243	Briefing Skills
IR-100	Information Resources
IS-180	Introduction to SIGINT Reporting
IS-231	Information Operations Analysis and Reporting
TA-274	OILSTOCK Introductory Training
TM-201	Principles of Collection and Collection Management

#### 4. NCS Self-Paced Exportable Courses:

<b>COURSE NUMBER</b>	<b>TITLE</b>
EA-009	Introduction to Signals Technology
EA-010	Introduction to SIGINT Technology
EA-011	Survey of Earth Satellites and Space Probes
EA-012	Survey of Missile and Space Launch Vehicles
EA-030	Introduction to Multichannel Technology
EA-162	Modulation Methods
EA-164	Introduction to Satellites
EA-183	Mathematics for SIGINT

EA-190	Digital Communications
EA-279	Fundamentals of TECHELINT
EC-124	Introduction to COMSAT
MA-Z10	Mini-Course in Statistics
MP-102	Computers at Work: Concepts and Applications
MP-119	Introduction to UNIX
TM-101	Introduction to Collection Management

**5. Agency Education Programs:**

<b>COURSE NUMBER</b>	<b>TITLE</b>
MESAP	Military ELINT Signals Analyst Program (MESAP): This program is an advanced level program. Upon completion, individuals are NSA-certified signals analysis and ELINT specialist.

**DEFENSE INTELLIGENCE AGENCY JOINT MILITARY INTELLIGENCE COLLEGE**

UGIP	Under-Graduate Intelligence Program (UGIP): The UGIP prepares selected military intelligence professionals for national- and joint-level assignments through study of strategic intelligence.
PGIP	Post-Graduate Intelligence Program (PGIP): The PGIP is a professional post-baccalaureate program in strategic intelligence which prepares military intelligence professionals for national- and joint-level assignments.

NOTE: AFI 14-106, Intelligence Research, Education and Training Programs, provides information on advanced education programs listed above and other higher education programs.

***Section E - MAJCOM Unique Requirements***

***NOTE:*** There are currently no MAJCOM unique requirements. This area is reserved.

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

GLEN D. SHAFFER, Brig Gen, USAF  
Director of Intelligence, Surveillance and Reconnaissance  
DCS Air and Space Operations

2 Attachments

1. Proficiency Code Key
2. 1N5X1 Specialty Training Standard

<b>THIS BLOCK IS FOR IDENTIFICATION PURPOSES ONLY</b>		
NAME OF TRAINEE		
PRINTED NAME ( <i>Last, First, Middle Initial</i> )	INITIALS ( <i>Written</i> )	SSAN
PRINTED NAME OF CERTIFYING OFFICIAL AND WRITTEN INITIALS		
<i>N/I</i>	<i>N/I</i>	

### QUALITATIVE REQUIREMENTS

PROFICIENCY CODE KEY		
	SCALE VALUE	DEFINITION: The individual
<b>TASK PERFORMANCE LEVELS</b>	<b>1</b>	Can do simple parts of the task. Needs to be told or shown how to do most of the task. (EXTREMELY LIMITED)
	<b>2</b>	Can do most parts of the task. Needs only help on hardest parts. (PARTIALLY PROFICIENT)
	<b>3</b>	Can do all parts of the task. Needs only a spot check of completed work. (COMPETENT)
	<b>4</b>	Can do the complete task quickly and accurately. Can tell or show others how to do the task. (HIGHLY PROFICIENT)
<b>*TASK KNOWLEDGE LEVELS</b>	<b>a</b>	Can name parts, tools, and simple facts about the task. (NOMENCLATURE)
	<b>b</b>	Can determine step by step procedures for doing the task. (PROCEDURES)
	<b>c</b>	Can identify why and when the task must be done and why each step is needed. (OPERATING PRINCIPLES)
	<b>d</b>	Can predict, isolate, and resolve problems about the task. (ADVANCED THEORY)
<b>**SUBJECT KNOWLEDGE LEVELS</b>	<b>A</b>	Can identify basic facts and terms about the subject. (FACTS)
	<b>B</b>	Can identify relationship of basic facts and state general principles about the subject. (PRINCIPLES)
	<b>C</b>	Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS)
	<b>D</b>	Can evaluate conditions and make proper decisions about the subject. (EVALUATION)
EXPLANATIONS		
<p>* A task knowledge scale value may be used alone or with a task performance scale value to define a level of knowledge for a specific task. (Example: b and 1b)</p> <p>** A subject knowledge scale value is used alone to define a level of knowledge for a subject not directly related to any specific task, or for a subject common to several tasks.</p>		

- This mark is used alone instead of a scale value to show that no proficiency training is provided in the course or CDC.

X This mark is used to show that training is required, but not given due to limitations in resources.

NOTE: All tasks and knowledge items shown with a proficiency code are trained during wartime.

NOTE 1: (U) Users are responsible for annotating training references to identify current references pending STS revision.

NOTE 2: (U) Procedures to acquire TRs: TRs not available through the Publication Distribution Office (PDO) system can be requisitioned from the following sources: USSID - NSACSS/P044; SEDSCAF - NSACSS/W2; KILTING/ EWIR - NSACSS/W2; CPL - NSACSS/W35; EPL - NSACSS/W212; RASIN Manual and Catalog - NSACSS/W35; TEXSIG Catalog - NSACSS/W3; TEBAG - NSACSS/W1; High Altitude Communications Satellite handbook - NSACSS/A173; Handbook of Existing and Planned Satellite Networks (Volume I and II) - NSACSS/A173; and DEFT Working Aids - NSACSS/E3 Ft Meade MD 20755-5000. For the Naval Ship Characteristics - USSR - order through the Naval Intelligence Center, 4301 Suitland Road, Washington DC (ATTN: D WINN NSSC-33). For DIA publications, see AFR 0-15 and 5-3. For NSRL, inquire through your command validation authority. These TRs, if applicable to your organization's mission, are considered essential to the proper conduct of OJT.

NOTE 3: (U) Items in column 2 marked with an asterisk (\*) are the critical tasks/knowledges that are to be trained in resident wartime courses. Items in column 2 marked with a slash (/) are wartime skills.

1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE TASKS	3. CERTIFICATION FOR OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED					
		A	B	C	D	E	A 3 SKILL LEVEL		B 5 SKILL LEVEL		C 7 SKILL LEVEL	
		START DATE	COMPLETION DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC
<b>1. SAFETY</b> Demonstrate an understanding of proper safety and first aid procedures associated with the use of electronic equipment and in compliance with applicable requirements TR: AFI 91-202, 91-301							1a			-	-	-
<b>2. SECURITY</b>												
2.1 Information security (INFOSEC) TR: USAFINTEL 201-1; DOD 5200.1R; AFI 31-401; AFPD 9-3	/						A			-	-	-
2.2 Communications Security (COMSEC) TR: DOD 5200.1R; AFI 31-401, 33-201, 33-211; AFPD 33-2, Atch 2.3 & 2.4	/						A			-	-	-
2.3 Operational Security (OPSEC) TR: AFI 10-1101	/						A			-	-	-
2.4 Computer Security (COMPUSEC) TR: AFSSI 5100; AFI 33-202, 33-212, 700-10; AFPD 33-2	/						A			-	-	-
2.5 Intelligence OVERSIGHT Program TR: USSID 18; AFI 14-104	/						A			-	-	-
2.6. SCI Indoctrination TR: DOD 5200.1R, AFR 31-401, AFI 14-302							A			-	-	-
<b>3. ORGANIZATION</b> <b>TR: DOD 5100.1</b>												
3.1. Identify the mission, function, and responsibility of the following national organizations in the intelligence cycle:												
3.1.1. National Security Council (NSC)							A			-	-	-
		3. CERTIFICATION FOR OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED					
1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE TASKS	A	B	C	D	E	A 3 SKILL LEVEL		B 5 SKILL LEVEL		C 7 SKILL LEVEL	
		START DATE	COMPLETION DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC

3.1.2. National SIGINT Committee Staff TR: Director of Central Intelligence Directive (DCID) 2/10							A			-	-	-
3.1.3. Director of Central Intelligence (DCI) TR: CIA FACTBOOK							A			-	-	-
3.2 Identify the mission, function and responsibility of the following defense organizations in the intelligence cycle:												
3.2.1 Defense Intelligence Agency (DIA) TR: DOD DIR 5105.21; DIAM 49-1, 58-1, VOL 1; DIA Capability Handbook							A			A	-	-
3.2.2 Central Intelligence Agency (CIA) TR: CIA FACTBOOK; CIA Homepage							A			A	-	-
3.2.3 National Security Agency/Central Security Service (NSA/CSS) TR: USSID 1							A			A	-	-
3.2.4 Service Cryptologic Elements (SCE) TR: USSID 1							A			A	-	-
3.2.5 National Security Operations Center (NSOC)							A			A	-	-
3.2.6 State roles and missions of S&T centers and how they support the national SIGINT mission TR: Analysis Handbook, Vol I							A			A	-	-
3.2.7 Tasking Authority TR: USSID 4							A			A	-	-
3.2.8. ELINT support to military operations (including ELINT, FISINT, PROFORMA, EC TR: USSID 57, JCS Pub 1							A			B		
		3. CERTIFICATION FOR OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED					
1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE TASKS	A	B	C	D	E	A 3 SKILL LEVEL		B 5 SKILL LEVEL		C 7 SKILL LEVEL	
		START DATE	COMPLETION DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC
3.2.9. ELINT Community TR: Analysis Handbook, Vol I							B			B		

3.3. Describe the purpose of the following intelligence functions: TR: DOD 5100.1													
3.3.1 SIGINT TR: USSID 412							A			A	-	-	
3.3.2 COMINT							A			A	-	-	
3.3.3 ELINT							B			B	-	-	
3.3.4 FISINT							A			A	-	-	
3.3.5 PROFORMA							A			A	-	-	
3.3.6 HUMINT TR: DCID 3/7(1)							A			A	-	-	
3.3.7 IMINT TR: DCID 2/9(1)							A			A	-	-	
3.3.8 MASINT TR: DCID 2/11							A			A	-	-	
3.3.9 Global Network Intelligence (GNI)							A			A	-	-	
3.4 Describe the difference between strategic and tactical intelligence as found in:													
3.4.1 OPELINT TR: Tactical Data Processing System (TDPS) User Guide	/						B			A	-	-	
3.4.2 TECHELINT TR: EA-279	/						B			A	-	-	
3.5 Describe the basic strategy of C2W with emphasis on Electronic Warfare (EW) to include: TR: Joint Chief Staff Memorandum Of Policy (JCS MOP) 30; AFI 10-705													
3.5.1 Components of EW TR: AFI 10-706													
3.5.1.1 Electronic Warfare Support (ES)	/						B			B	-	-	
3.5.1.2. Electronic Attack (EA)							A			B	-	-	
3.5.1.3. Electronic Protect (EP)	/						A			B	-	-	
3.5.2. Basic principles TR: EA-279													
		3. CERTIFICATION FOR OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED						
1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE TASKS	A	B	C	D	E	A 3 SKILL LEVEL		B 5 SKILL LEVEL		C 7 SKILL LEVEL		
		START DATE	COMPLETION DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC	
3.5.2.1. Types of jamming	/						A			B	-	-	
3.5.2.2. Effectiveness of jamming	/						A			B	-	-	
3.5.2.3. Data error rates	/						A			B	-	-	
3.5.2.4. Data sync errors	/						A			B	-	-	

3.5.3. Platforms and Operations													
3.5.3.1. EC assets							A			B	-	-	
3.5.3.2. Operational employment							A			B	-	-	
<b>4. MATH</b> <b>Solve problems using mathematical formulas and radar parameters</b> TR: EA-183							2b			B	-	-	
<b>5. PRINCIPLES OF ELECTRO-MAGNETIC ENERGY</b> TR: EA-279, EA-100, EA-161, EA-162													
5.1 Define relationships, properties, characteristics and aspects of Electromagnetic Energy, Waveforms and Modulation	/						B			-	-	-	
5.2 Define the terms associated with electromagnetic energy to include, but not limited to:													
5.2.1 Electromagnetic energy	/						B			B	-	-	
5.2.2 Electromagnetic spectrum	/						B			B	-	-	
5.2.3 Radio frequency (RF)	/						B			B	-	-	
5.2.4 RF spectrum	/						B			B	-	-	
5.3 Define and/or describe aspects of waveforms, terms, concepts, characteristics, and display techniques associated with Electromagnetic energy, to include but not limited to:													
5.3.1 Sinewave	/												
		3. CERTIFICATION FOR OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED						
1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE TASKS	A	B	C	D	E	A 3 SKILL LEVEL		B 5 SKILL LEVEL		C 7 SKILL LEVEL		
		START DATE	COMPLETION DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC	
5.3.1.1. Cycle	/						B			B	-	-	
5.3.1.2. Period (time)	/						B			B	-	-	
5.3.1.3. Wavelength	/						B			B	-	-	
5.3.1.4. Frequency (rate)	/						B			B	-	-	
5.3.1.5. Phase (angle/frequency)	/						B			B	-	-	
5.3.2. Complex waveforms													
5.3.2.1. Linear/non-linear mixing	/						B			B	-	-	

5.3.2.2. Fourier Components (series)	/							A			B	-	-
5.3.2.3. Bandwidth	/							B			B	-	-
5.3.2.4. Pulse characteristics	/							B			B	-	-
5.3.3. Signal-Noise Ratio	/							A			B	-	-
5.4. Describe aspects of modulation associated with electromagnetic energy, to include, but not limited to:													
5.4.1 Amplitude Modulation	/							B			B	-	-
5.4.2 Angle Modulation													
5.4.2.1 Frequency	/							B			B	-	-
5.4.2.2 Phase	/							B			B	-	-
5.4.3 Pulse Modulation													
5.4.3.1 Pulse Amplitude Modulation	/							B			B	-	-
5.4.3.2 Pulse Frequency Modulation	/							B			B	-	-
5.4.3.3 Pulse Code Modulation	/							B			B	-	-
5.4.3.4 Pulse Duration Modulation	/							B			B	-	-
5.4.3.5 Pulse Position Modulation	/							B			B	-	-
5.4.3.6 Pulse Group Modulation	/							B			B	-	-
5.4.4 Multiplexing													
5.4.4.1 FDM	/							B			B	-	-
5.4.4.2 TDM	/							B			B	-	-
		3. CERTIFICATION FOR OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED						
1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE TASKS	A	B	C	D	E	A 3 SKILL LEVEL		B 5 SKILL LEVEL		C 7 SKILL LEVEL		
		START DATE	COMPLETION DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC	
5.4.5. RF agile signals	/							A			B	-	-
5.5. Describe antenna characteristics, to include, but not limited to:													
5.5.1. Type								A			B	-	-
5.5.2. Impedance								A			A	-	-
5.5.3. Patterns								A			B	-	-
5.5.4 Bandwidth	/							A			B	-	-
5.5.5 Beamwidth	/							A			B	-	-
5.5.6 Gain	/							A			B	-	-
5.5.7 Polarization	/							A			B	-	-
5.5.8 Reciprocity								A			B	-	-
5.5.9 Directivity	/							A			B	-	-
5.5.10 Transmission line								A			-	-	-



6.1.1.7.1. Bandwidth	/						2b			-	-	-
6.1.1.7.2 Pulse Repetition Frequency (PRF)/Interval (PRI)	/						2b			-	-	-
6.1.1.7.3 Pulse Duration (PD)/Width (PW)	/						2b			-	-	-
6.1.1.7.4 Duty cycle	/						2b			-	-	-
6.1.1.7.5 Scan type	/						2b			-	-	-
6.1.1.7.6 Appropriate scan measurement (e.g. time/ rate, lobe duration, beamwidth, etc.)	/						2b			-	-	-
6.1.1.7.7 Frequency spectrum							2b			-	-	-
6.1.1.7.8 Pulse train characteristics (e.g. stagger, dwell/switch, sliding, etc.)							2b/b/ X			-	-	-
6.1.1.7.9 Intrapulse modulation characteristics							2b/b/ X			-	-	-
6.1.1.7.10 Pulse Doppler pulse train characteristics							2b/b/ X			-	-	-
6.1.1.7.11 Document descriptive and measurable characteristics TR: USSID 350							2b			-	-	-
6.1.2 Digital Analysis TR: EA-281												
3. CERTIFICATION FOR OJT							4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED					
1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE TASKS	A	B	C	D	E	A 3 SKILL LEVEL		B 5 SKILL LEVEL		C 7 SKILL LEVEL	
		START DATE	COMPLETION DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC
6.1.2.1. Determine intrapulsed modulation based on CAD/BAD digitized data							2b			-	-	-
6.1.2.2. Determine interpulse parameters based on TBD digitized data							2b			-	-	-
6.1.2.3. Perform digital signal analysis												
6.1.2.3.1. Bandwidth	/						2b			-	-	-
6.1.2.3.2. PRF/PRI	/						2b			-	-	-
6.1.2.3.3. PW/PD	/						2b			-	-	-
6.1.2.3.4. Duty cycle	/						2b			-	-	-
6.1.2.3.5. Scan type	/						2b			-	-	-
6.1.2.3.6. Appropriate scan measurement (e.g., time/rate, lobe duration, beamwidth, etc.)	/						2b			-	-	-
6.1.2.3.7 Frequency spectrum characteristics							2b			-	-	-



7.4.1. CW/FM-CW	/							B			B	-	C
7.4.2. Intrapulse													
7.4.2.1. Pulse compression	/							B			B	-	C
7.4.2.2. Chirp generation	/							B			B	-	C
7.4.3. Interpulse													
7.4.3.1. Pulse sliding/stepping/switch and dwell	/							B			B	-	-
7.4.3.2. Pulse jitter	/							B			B	-	-
7.4.3.3. Pulse stagger	/							B			B	-	-
7.4.3.4. Pulse group modulation	/							B			B	-	-
7.4.4. Pulse code	/							A			B	-	-
7.4.5. Pulse Doppler	/							A			B	-	-
1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE TASKS	3. CERTIFICATION FOR OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED						
		A	B	C	D	E	A 3 SKILL LEVEL		B 5 SKILL LEVEL		C 7 SKILL LEVEL		
		START DATE	COMPLETION DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC	
7.5. Describe radar characteristics and parametric values to include, but not limited to:													
7.5.1. Radio frequency (RF)	/							B			B	-	C
7.5.2. Wideband	/							A			B	-	-
7.5.3. Modulation Type/Pulse per Group (MT/PG)	/							B			B	-	-
7.5.4. Pulse Repetition Frequency (PRF)	/							B			B	-	-
7.5.5. Pulse Repetition Interval (PRI)	/							B			B	-	-
7.5.6. Pulse Group Repetition Frequency (PGRF)	/							B			B	-	-
7.5.7. Pulse Group Repetition Interval (PGRI)	/							B			B	-	-
7.5.8. Pulse Duration/Width (PD/PW)	/							B			B	-	-
7.5.9. Scan Type (T)	/							B			B	-	-
7.5.10. Scan Period (SP)	/							B			B	-	-
7.5.11. Illumination Rate (IR)	/							B			B	-	-
7.5.12. Lobe Duration (LD)	/							A			B	-	-
7.5.13. Beamwidth (BW)	/							A			B	-	-
7.5.14. Frame/Channel Rate	/							A			B	-	-
7.6. Describe radar system functions to include, but not limited to: TR: ATIP 3-1, Vol 2													
7.6.1. Airborne systems	/												
7.6.1.1. Air bombing	/							B			B	-	-
7.6.1.2. Air mapping	/							B			B	-	-
7.6.1.3. Fire control	/							B			B	-	-

7.6.2. Landbased systems	/													
7.6.2.1. Early warning	/							B				B	-	-
7.6.2.2. Battlefield surveillance	/							B				B	-	-
7.6.2.3. Fire control	/							B				B	-	-
7.6.2.4. Missile control	/							B				B	-	-
7.6.2.5. Controlled intercept	/							B				B	-	-
7.6.2.6. Coastal surveillance	/							B				B	-	-
1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE TASKS	3. CERTIFICATION FOR OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED							
		A	B	C	D	E	A 3 SKILL LEVEL		B 5 SKILL LEVEL		C 7 SKILL LEVEL			
		START DATE	COMPLETION DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC		
7.6.3. Shipborne system	/													
7.6.3.1. Early warning, surface search, and navigation	/							B				B	-	-
7.6.3.2. Fire control	/							B				B	-	-
7.6.4. Space systems	/							B				B	-	-
7.6.5. Air defense systems TR: ATTP 3-1, Vol 2; JTENS	/							B				B	-	-
7.6.6. Moving Target Indicator (MTI)/Moving Target Detection (MTD)	/							B				B	-	-
7.6.7. Multi-function	/							B				B	-	-
7.6.8. Jammers (active/passive)	/							B				B	-	-
7.7. Define the characteristics associated with Wartime Reserve Mode (WARM) operation TR: ONI-TA-014-97; USSID 52; EWIR	/							B				B	-	-
7.8. Perform threat correlation by correlating electronic/weapon fit to associated landbased, airborne, and/or shipborne platform. TR: James; DIA Factbook; EPL; ATTP 3-1, Vol 2	/							2b				B	-	-
7.9. Perform/describe Specific Emitter Identification (SEI) by correlating electronic/weapon fit to associated landbased, airborne, and/or shipborne hostile platform.	/													
7.9.1. Crystal controlled emitters.	/							A				B	-	-
7.9.2. Non-crystal controlled emitters.	/							A				B	-	-

<b>8. ORBITAL MECHANICS</b> TR: JTENS, EA-164, Space Handbook analysts guide, Vols 1 & 2; AU-18, Air University Press												
1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE TASKS	3. CERTIFICATION FOR OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED					
		A	B	C	D	E	A 3 SKILL LEVEL		B 5 SKILL LEVEL		C 7 SKILL LEVEL	
		START DATE	COMPLETION DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC
8.1. Define relationships, properties, characteristics, and aspects of orbiting bodies							A			B	-	-
8.2. General laws												
8.2.1. Define orbital parameters							A			B	-	-
8.2.2. Define reference systems							A			B	-	-
<b>9. FOREIGN INSTRUMENTATION SIGNALS (FISINT)</b> TR: Handbook of Existing and Planned Satellite Networks, Vols I & II; DIA Space systems Handbook; High Altitude Communications Satellite Handbook; USSID 105; Reconnaissance/ Surveillance Space Systems (DIA); TEBAG												
9.1. Define relationships, properties, characteristics, and aspects of Foreign Instrumentation Signals using theoretical and technical terms and definitions							A			B	-	-
9.2. Describe the nature of the target												
9.2.1. Signal concepts							A			-	-	-
9.2.2. Space vehicles							A			-	-	-
9.2.3. FIS systems TR: EA-50							A			-	-	-
9.3. Describe collection systems							A			-	-	-
9.4. FISINT Reports							A			-	-	-

<b>10. PROFORMA</b> Define PROFORMA signals properties, characteristics, and aspects. TR: ATTP 3-1, Vol2, Chapters 1 & 2; CPL; EPL; PSI; PCI; RASIN Manual/Catalog; USAF PSH Vols I & II							A			B	-	-
1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE TASKS	3. CERTIFICATION FOR OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED					
		A	B	C	D	E	A 3 SKILL LEVEL		B 5 SKILL LEVEL		C 7 SKILL LEVEL	
		START DATE	COMPLETION DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC
<b>11. ELINT COLLECTION</b> TR: DIA Cap handbook; DIAM 58-17, 58-18; JTENS, EA-279												
11.1. Describe the signal collection process using theoretical terms and definitions	/						B		B	-	-	
11.2. Describe collection system components	/						B		B	-	-	
11.3. Describe collection techniques	/						B		B	-	-	
11.4. Define manual collection systems	/						A		-	-	-	
11.5. Define automatic collection systems	/						B		B	-	-	
11.6. Define semi-automatic collection systems	/						B		B	-	-	
11.7. Describe magnetic tape recordings TR: DEFT WA4												
11.7.1. Downstream monitoring							A		-	-	-	
11.7.2. Upstream monitoring							A					
11.8. Perform down conversion TR: DEFT WA 11; ATH Vol V							1a		-	-	-	
11.9. Perform predetection TR: DEFT WA 11; ATH Vol V							1a		-	-	-	
11.10. Perform AM/FM detection TR: DEFT WA 11; ATH Vol v							1a		-	-	-	
11.11. Perform center tuning TR: DEFT WA 11; ATH Vol V							1a		-	-	-	



12.5.1. Electronic Orders of Battle (EOB) TR: Modernized Integrated Database II (MIDBII)	*							2c			c	-	c
1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE TASKS	3. CERTIFICATION FOR OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED						
		A	B	C	D	E	A 3 SKILL LEVEL		B 5 SKILL LEVEL		C 7 SKILL LEVEL		
		START DATE	COMPLETION DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC	
12.5.2. Electronic Weapons Fits (EWF)							2a			A	-	-	
12.6. Identify threat systems using ATIP 3-1, Vol 2 TR: ATIP 3-1, Vol 2							1a			a	-	-	
<b>13. DATA PROCESSING</b> TR: TDPS User Guide; Midas Users Manual; EPL; GALE-LITE User Guide; Intelink; MARTES signals analysis techniques guide													
13.1. Perform data processing using mapping tools, algorithms, ELINT reports, and display tools	/						2b			b	-	-	
13.2. Computer principles													
13.2.1. Functions, principles, and fundamentals	/						1a			b	-	-	
13.2.2. Computer based applications	/						1a			b	-	-	
13.3. Extract data from ELINT reports	/						2b			b	-	-	
13.4. Correlate ELINT data	* /						2b			b	-	-	
13.5. Manipulate data	/						2b			b	-	-	
13.6. Map/correlate activity level to include:													
13.6.1. Location	/						2b			b	-	-	
13.6.2. Level (command)	/						2b			b	-	-	
13.7. Describe computer applications and analysis													
13.7.1 INTELINK TR: INTELINK Project Homepage							A			B	-	-	
13.7.2. GATE-LITE							A			B	-	-	
13.7.3. MARTES							A			B	-	-	
13.7.4. K2000 TR: K2000 Homepage							A			B	-	-	
13.7.5. Theater Battle Management Core System(TBMCS) TR: TBMCS User Guide							A			A	-	-	
		3. CERTIFICATION FOR OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED						

1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE TASKS	A	B	C	D	E	A 3 SKILL LEVEL		B 5 SKILL LEVEL		C 7 SKILL LEVEL	
		START DATE	COMPLETION DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC
13.8. Describe the function and purpose of ELINT databases												
13.8.1. KILTING/EWIR TR: AFI 10-703							A			B	-	-
13.8.2. WRANGLER/ Emitter Intercept Data Base (EIDB) TR: WRANGLER User Guide							A			B	-	-
13.8.3. NSRL TR: NSRL Handbook							A			B	-	-
13.8.4. TECGM TR: TECGM							A			A	-	-
13.8.5. Modernized Integrated Data Base II (MIDB II) TR: MIDB II Fundamentals and Applications Homepage							A			B	-	-
13.8.6. STAR SAPPHIRE TR: STAR SAPPHIRE Homepage							A			A	-	-
<b>14. INTELLIGENCE PREPARATION OF THE BATTLESPACE (IPB)</b> TR: IPB and AMNS Introduction Homepage; FM 34-103, Chapter 1							A			B	-	-
1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE TASKS	3. CERTIFICATION FOR OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED					
		A	B	C	D	E	A 3 SKILL LEVEL		B 5 SKILL LEVEL		C 7 SKILL LEVEL	
		START DATE	COMPLETION DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC
<b>15. INFORMATION OPERATIONS (IO)</b> TR: DOD Directive 3600.1; Joint Pub 3-13; Joint Doctrine for Information Operations; Joint Pub 3-51; TO 33A1-1-141, Vols 11&12; ATTP 3-1, Vol 2; CJCS MOP 30; CJCSI 3210.1; FM 100-6; AIA Integrating and Conducting IO; Structuring the AIA Vision-IO; Embedding into Air Force Operations (Website); AIA IO CONOP; AFDD 2-5							A			B	-	-

<b>16. REPORTING</b> TR: USSIDs 115, 140, 240, 305, 315, 340, 369													
16.1. Use descriptive and/or measurable characteristics to prepare analysis worksheets/logs	/						2b			B	-	-	
16.2. Perform plotting techniques:													
16.2.1. Measure distance on a map/chart	/						2a			A	-	-	
16.2.2. Determine grid coordinates	/						2a			A	-	-	
16.2.3. Determine latitude/longitude	/						2a			A	-	-	
16.3. Identify topographic symbols on a military map/chart	/						2a			A	-	-	
16.4. Describe how all-source collected data is used to create a finished intelligence product TR: AFM 14-210, Chap 2							A			B	-	-	
16.5. Compile and prepare ELINT reports													
16.5.1. JINTACCS TR: USSID 340	/						2b			B	-	-	
16.5.2. UNIFORM reporting format TR: USSID 351	/						2b			B	-	-	
1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE TASKS	3. CERTIFICATION FOR OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED						
		A	B	C	D	E	A 3 SKILL LEVEL		B 5 SKILL LEVEL		C 7 SKILL LEVEL		
		START DATE	COMPLETION DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC	
16.5.3. UNIFORM C Reporting Format TR: USSID 350	/						2b			B	-	-	
16.5.4. Product Verification Request (PVR) TR: PVR Homepage	/						B			B	-	-	
16.6. Describe the following reporting mechanisms, including but not limited to the following:													
16.6.1. TDDS/TRE TR: TADIX B User Guide							B			B	-	-	
16.6.2. TADIXS B TR: TADIX B User Guide							A			B	-	-	
16.6.3. TACELINT TR: USSID 340							A			B	-	-	
16.6.4. OPINTEL TR: USSID 340							A			-	-	-	
16.6.5. CRITICOM TR: USSID 301							A			-	-	-	

16.6.6. Tactical Integrated Broadcast System (TIBS) TR: USSID 340								A			B	-	-
16.6.7. Integrated Broadcast System (IBS)								A			A		
<b>17. SUPERVISION</b> TR: AFIs 36-2101, 36-2103, 36-2403, 36-901; AFMAN 36-2108													
17.1. Orient new personnel								-			-	-	-
17.2. Assign duties								-			-	-	-
17.3. Coordinate work with other people								-			-	-	-
17.4. Establish priorities								-			-	-	-
17.5. Schedule work performance								-			-	-	-
17.6. Evaluate work performance of subordinate personnel								-			-	-	-
<b>18. TRAINING</b> TR: AFI 36-2201													
18.1. Evaluate personnel to determine need for training								-			-	-	-
1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE TASKS	3. CERTIFICATION FOR OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED						
		A	B	C	D	E	A 3 SKILL LEVEL		B 5 SKILL LEVEL		C 7 SKILL LEVEL		
		START DATE	COMPLETION DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC	
18.2. Plan and supervise UGT							-				-	-	-
18.2.1. Prepare job qualification standards							-				-	-	-
18.2.2. Conduct training							-				-	-	-
18.2.3. Counsel trainees on their progress							-				-	-	-
18.2.4. Monitor effectiveness of training													
18.2.4.1. Career knowledge upgrade							-				-	-	-
18.2.4.2. Job proficiency upgrade							-				-	-	-
18.2.4.3. Qualification							-				-	-	-
18.3. Maintain training records							-				-	-	-
18.4. Evaluate effectiveness of training programs							-				-	-	-
18.5. Recommend personnel for formal training TR: AFCAT 36-2223; AFIs 36-2101, 36-2201; AFMAN 36-2108							-				-	-	-
SUMMARY OF REVISED, DELETED OR ADDED MATERIAL													

This STS constitutes a major change from the April 1997 STS due to the findings of the 1N5X1 Utilization and Training Workshop (U&TW) held at Goodfellow AFB, 30 March – 1 April 1999. This STS meets the ELINT Entry-Level Training Executive Agent (EA) Course Training Standard (CTS) which was revised during the CTAG held at NSA FANX II, MD, October 1998. The US Navy was appointed EA for ELINT entry-level training, and AF provides decentralized execution of this training as designated in ASD (C31) Memo, Executive Agent Designation for ELINT Training, 19 September 1995.